Occupational HAZARDS

JUNE 1940

JUN 12 1940

Articles of Economic Interest to Management

Control of Industrial Skin Infections

Prescribed Salt Requirements for Workers

Goggles a Part of Project's Economies

A Plan to Reduce Accident Frequency Rate

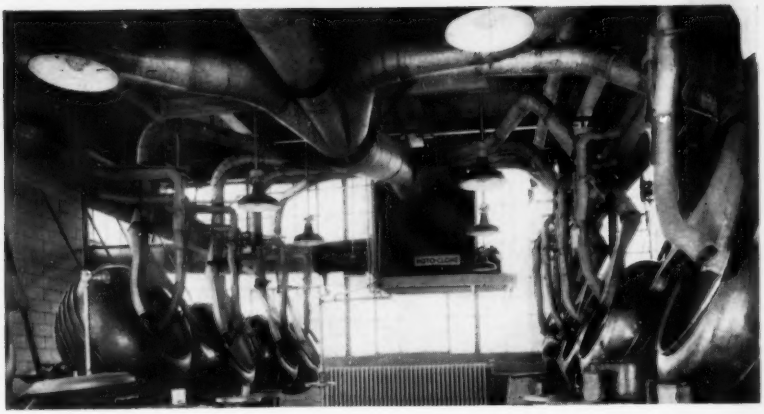
Proven Money-Savers from Widespread Sources

The only management publication devoted exclusively to the engineering control of:

Dusts • Fumes • Vapors • Gases • Organic Solvents

Dermatitis • Industrial Sanitation

Industrial Health & Safety



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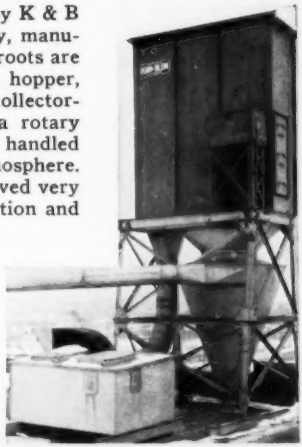
THIS unique system was designed and built by K & B Engineers for the Wm. S. Merrell Company, manufacturing pharmacists of Cincinnati. Herbs and roots are picked up through a specially-designed swivel hopper, delivered under high vacuum to a combination collector-arrestor filter, and dropped by gravity into a rotary mixer. 3000 pounds of finest materials can be handled per hour without dusting or loss to outside atmosphere. Only 7½ h.p. required. The installation has proved very satisfactory, and has helped to increase production and lower manufacturing costs.



Put your dust or fume removal problems up to our Engineers. They will make a careful survey of your plant and recommend a definite solution. Write today for details of this service.

THE KIRK & BLUM MFG. CO., 2816 Spring Grove Ave., Cincinnati, Ohio
Chicago Representative: C. P. Guion, 1661 N. Milwaukee
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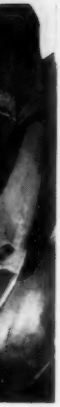
Louisville: Liberty Eng. & Mfg. Co., Inc., 1450 15th Street

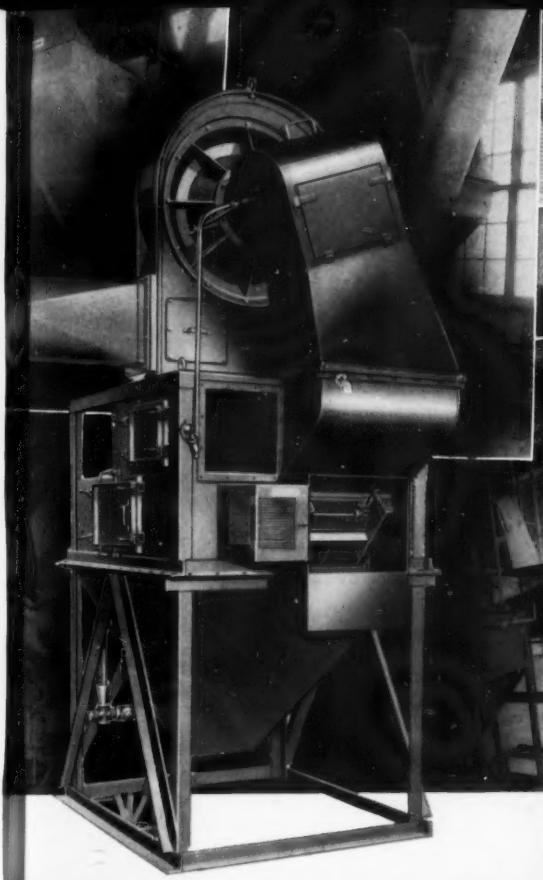
KIRK & BLUM

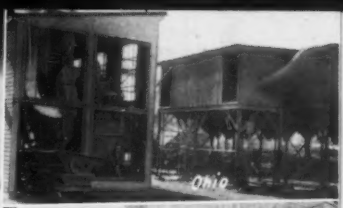
DUST AND FUME CONTROL

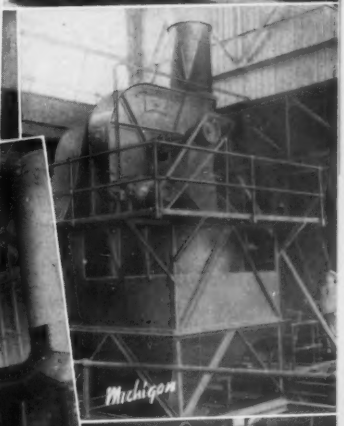
ENGINEERS AND CONTRACTORS



ERBS







WHEREVER THERE ARE DUST PROBLEMS

Industries—large and small—have found the Type W Roto-Clone a satisfactory and economical solution to their dust problems.

Installations for all types of industrial operations are proving their high efficiency and outstanding performance under the most severe operating conditions.

Complete information on the application of Roto-Clone, both wet and dry types, is given in the new Roto-Clone picture book which illustrates and describes 79 installations in 52 companies who have purchased more than 800 Roto-Clones since 1932. Write for your copy.

AMERICAN AIR FILTER CO., INC.
INCORPORATED
281 CENTRAL AVE., LOUISVILLE, KY.

ROTO-CLONE
WATER SPRAY
DYNAMIC PRECIPITATOR

AIR FILTRATION AAF DUST CONTROL

Who's too Small for A Health Program?

TWO YEARS ago the National Association of Manufacturers established its Committee on Healthful Working Conditions to promote health in industry. This committee, with Dr. Victor G. Heiser world renowned medical executive as Consultant, has studied the value and actual operation of factory health programs and issued a nine page folder from which we quote:

"Many small manufacturers who are asking themselves 'Can we afford a health program?' might well rephrase the question to say 'Can we afford *not* to have a health program?'

"The health costs in the average company with only the ordinary risks of accidents and disease are worth review:

"A 500-man plant has an expectancy each year of 335 days of disability due to industrial diseases and accidents, and 4,500 days are due to non-occupational illness and injury. A total of 4,835 man days of disability per year. Translated into money, this represents an average wage loss to the employees of $24,175 a year, based on a $5 daily wage.

"Such loss is inevitably associated with a parallel disruption of production and, in addition, it directly affects the costs of compensation to the company. This amount of loss is in proportion to the number of employees in a small plant so that, in a 200-man plant, the wage loss is about $10,000 per year, and in a 100-man plant about $5,000 per year.

(Please turn to page 4)

Quick defense against **THERMOPLEGIA**

Industry's heat plague that strikes at profits through workers' health and lives

THERMOPLEGIA, known as "heat sickness" or "heat prostration," comes from a loss of salt in sweat. Unless corrected, it may end in violent cramps or complete collapse. Science has found a way to replace precious salt lost in perspiration, by salt taken with drinking water. The Research Department of International Salt Company, Incorporated, has found a way to make salt more palatable by compressing pure, refined salt into tablets known as Sterling SalTabs. Ask your supplier, your International representative or write for folder to International Salt Company, Incorporated, Scranton, Pa.

• SalTabs dispensers: for 1,000 tablets $4; for 500 tablets $3.25. SalTabs are made of refined salt—also available made of 70% refined salt and 30% dextrose; in boxes of 250, 500 or 1,000.

Sterling SALTABS
T M REG U S PAT OFF
The quick-acting salt tablets

The publications briefly described in this service department are prepared by manufacturers' technical experts. The data they contain on equipment supplies and prevention methods applies to varied phases of occupational hazard problems. Note those items desired on coupon below and send to Occupational Hazards, 812 Huron Rd., Cleveland, Ohio. See pages 24 and 25 for New Products.

296—FREE TRIAL HAND CLEANER
Sugar Beet Products Company offers a free trial supply of their formula for cleansing the hands safely. See page 10.

297—CARE OF SAFETY GOGGLES
The American Optical Company has evolved a set of simple rules on the care of safety goggles. The bulletin features proper methods of sterilizing goggles, also instructions on their proper adjustment.

298—SAFETY CLOTHING CATALOG
Time and money-saving ideas in the use of gloves, mitts, finger guards, hand pads, sleeves, aprons, leggings, etc., are discussed in the new 18 page catalog of the Industrial Gloves Company.

299—VENTILATING FANS
In a 16 page illustrated catalog Emerson Electric Company points out where and how to install fans for maximum benefits; also how to determine most effective size.

300—FLOOR CLEANING EQUIPMENT
Hints and ideas answering the question "How to Keep Floors Clean" are contained in a new bulletin released by the Continental Car-Na-Var Corporation.

301—MOTION PICTURE EQUIPMENT
The use of motion picture equipment to visually record ideas for Safety programs is gaining popularity. A bulletin of the Berndt-Maurer Corp., describes practical application of movies.

302—MAN-COOLING FANS
The Victor Electric Products Company has released a catalog describing their full line of High Velocity Fans that are claimed to deliver safe, cooling breezes without a draft.

303—SANITATION FACILITIES
Various types of group-wash fixture installations; how your plant can benefit from the use of well-planned washroom layouts, are discussed in literature prepared by the Bradley Washfountain Company. See page 5.

304—SALT TABLETS
New data by Fairway Laboratories on their Salt Tablets and Dispensers include a Reduced Price List and booklet entitled "Keep Your Workmen On Their Feet." See page 14.

305—DUST CONTROL
Tailor-made dust control installations are described in the literature of The Dixie Mfg. Company. Reference is made to a variety of undesirable dust conditions and methods suggested for their control.

306—RUBBER GLOVES
The Pioneer Rubber Company discuss their liberal trial plan which makes it possible to test their "Stanzoil" gloves in your own plant.

307—HOT WEATHER AIDS
In a liberally illustrated pamphlet the Pulmosan Safety Equipment Company gives helpful health rules and hot weather suggestions to minimize heat hazards among workers. See page 28.

FREE LITERATURE COUPON Clip out and paste on postcard or enclose in envelope.
Mail to: OCCUPATIONAL HAZARDS, 812 Huron Road, Cleveland, Ohio.

Nos. of desired items .....

Firm Name .....

Your Name ..... Position .....

Street and Number of Your Firm .....

City ..... State .....
FL-21

(Continued from page 2)

"That such losses are reducible by a health program was confirmed by company after company surveyed by the Committee. For instance, these are typical comments:

"Absenteeism reduction: A small processing plant reports:

" 'In consequence (of a health and safety program), compensation cases were cut down from 31 cases per year to 10, and days lost were cut down from 2,430 to 290.'

"Accident reduction: A packing plant with about 500 employees states:

" 'We feel that our health and safety program, operating under the guidance of our Medical Department and Safety Committees, has reduced our labor turn-over, is appreciated by our employees, and is a paying proposition. During the operation of this program, our frequency and severity rates have dropped 86.78% and 71.22% respectively.'

"Labor turnover: A 225-man foundry states:

" 'As to dollar and cents return, we find that these improved conditions have reduced the labor turnover which is a major expense in a jobbing foundry. Our estimate of training the average molder would be $200 at a minimum, and we can cite definite instances where the employee has left the company only to return a few weeks later due mainly to working conditions.'

"Compensation reduction: A 60-man rubber fabricating plant finds:

" '1938 retroactive compensation credit of 22.6% because of excellent accident and disease experience.'

"As to the investment necessary to do this, it has been demonstrated by the U. S. Public Health Service that the expenditure by a company of $8 per man per year on a health program should yield a $12, or 150%, return per year to that company."

The complete copy of this Report can be obtained by writing the Editor, OCCUPATIONAL HAZARDS—Caxton Building, Cleveland, Ohio.

JOHNSON ANKLE ACTION RUBBER LADDER SHOES
WILL IMPROVE YOUR SAFETY PROGRAM
THEY WILL NOT SLIP
★

Over 10,000 plants are now using them. Endorsed by Safety Engineers everywhere.
Send us a trial order to-day.
★
$1.80 per pair for extension ladders.
JOHNSON LADDER SHOE CO.
EAU CLAIRE, WIS.

Depends on Whose Bull gets Gored

An employee of a steel company filed application for payment of medical fees incurred for treatment of a fractured rib. While at work a fellow worker, in a playful mood, hugged him so hard that a rib cracked.

Recently, a 72-year-old clerical employee of a sand and gravel concern applied for compensation for disability due, as he alleges, to a nervous condition and deafness. In his application he charges that one of his bosses prematurely celebrated the Glorious Fourth by setting off a cannon cracker behind him.

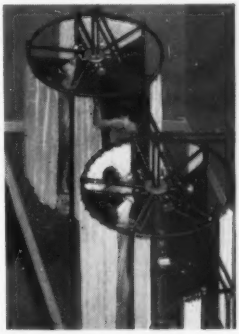
While fighting a fire, a city fireman was overcome by smoke and other firemen came to his assistance. In getting him out of the building they sprained his knee, although he suffered no ill effects from the smoke. He has applied for compensation.

A chemist, while working in the biological department, noticed a mouse on the floor. He struck at it with a broom and the broom handle struck him in the right eye, causing contusion of the eyeball, hemorrhage and lacerations of the upper lid. He lost no time but applied for the payment of medical fee bills.

O. I. C.-Monitor

Showers for Everyone NOW
Bradley Multi-Stall Showers Mean Low Cost Installations

A 5-Stall Bradley Shower is as easy to install as the conventional single stall shower. One hot water connection, one cold water and one drain are all the piping connections required to serve all *five stalls.* . . . Clean and sanitary,—proof against sudden chilling or scalding,—Bradley Multi-Stall Showers provide washing facilities at low initial and maintenance cost. Our Booklet "Washroom Layouts" contains helpful suggestions. . . . Let us mail you a copy. . . . BRADLEY WASHFOUNTAIN CO., 2259 West Michigan Street, Milwaukee, Wisconsin.



BRADLEY
MULTI-STALL SHOWERS

A Large Scale Health and Safety Enterprise

THE PRELIMINARY annual report of the Industrial Commissioner of New York points to a significant safety record on the job of constructing a $200,000,000 aqueduct tunnel to bring an increased water supply to New York City, one quarter of which has been completed. The report says:

Construction work during 1939 was 20 percent safer than normal expectancy because of strict enforcement and willing observance of the labor law and the industrial codes.

To the Labor Department's tunnel inspectors and industrial hygiene engineers falls the job of enforcing the safety provisions of the labor law and industrial codes. These cover tunnel construction, the use of explosives, and the control of silicosis and toxic gases.

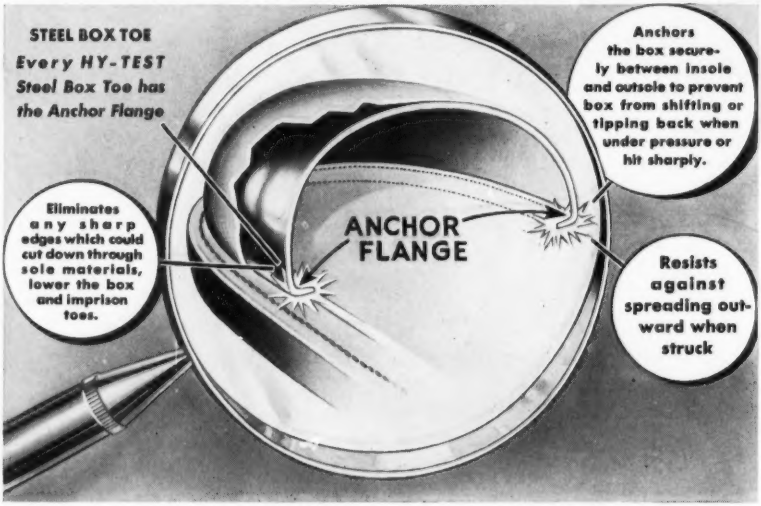
But behind the field force have been the department's engineers, chemists, and doctors and its research laboratory.

The report goes on to describe in detail how this health and safety record has been achieved:

In 11 months this year there have been 160 inspections made and 524 orders issued to contractors to comply with the law and to correct hazardous conditions. **In order to measure the effectiveness of ventilating systems, the department has made 487 dust counts, 158 air samples, 463 air-velocity and air-pressure determinations, 368 temperature and humidity determinations, and 79 tests for the appraisal of illumination.**

SEE THE ANCHOR FLANGE

LEARN WHY IT MAKES HY-TEST THE SAFER SAFETY SHOE FOR ALL TYPES OF INDUSTRIAL WORK


STEEL BOX TOE
Every HY-TEST Steel Box Toe has the Anchor Flange
Anchors the box securely between insole and outsole to prevent box from shifting or tipping back when under pressure or hit sharply.
Eliminates any sharp edges which could cut down through sole materials, lower the box and imprison toes.
ANCHOR FLANGE
Resists against spreading outward when struck

The Anchor Flange is a reinforcing rim which is formed by turning inward the extended bottom edge of the steel box toe. It extends completely around the bottom of the steel cap and locks into position between the inner and outer soles. This extra-wide flange forms a strengthened rim which performs the vital safety functions indicated in the circles above. Let a Hy-Test representative show you and your safety director the Hy-Test Safety Shoes for *your* industry.

HY-TEST Safety Shoes

Write for a Hy-Test Representative to Call

HY-TEST DIVISION, INTERNATIONAL SHOE CO., ST. LOUIS, MO.

Occupational HAZARDS

JUNE 1940

Volume 2 Number 9

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812 Huron Road, Cleveland, Ohio

Irving B. Hexter, President — L. P. Aurbach, Vice-President
Jack Weiss, Associate Editor — William S. Papworth, Associate Editor

Proper Sanitation Facilities for Control of

By E. WARI
Industrial Hygienist, America

PART

A series of articles comprising twelve questions about dermatitis. Answers are sufficiently comprehen-

sive that
ing a der
it with a

UNLIKE the traumatic hazards which cut fingers and crush toes and respond to obvious mechanical and supervisory treatment, and also unlike the specific occupational disease hazards which have the nose and mouth for the portal of entry, and which also respond to mechanical control of the atmosphere, there is nothing that simple about the control of dermatitis hazard. The number of irritating substances is enormous; some of them irritate only when the worker's physical condition is peculiarly receptive. The cause of difficulty may be mechanical, chemical, bacteriological, or physiological, and the controls are varied and various.

A notion that industrial dermatitis is minor in importance, inexpensive, and altogether simple, is erroneous. On the contrary, it is the largest single occupational hygiene problem, costs industry millions of needless dollars, and is too complicated to be solved by executive order, employee supervision, or mechanical guarding. Whatever steps may be followed, the first is always medical diagnosis by doctors specializing in skin ailments. Encouragement may be taken from the single fact that industrial dermatitis is almost never fatal, and rarely permanently disabling.

QUESTION 1

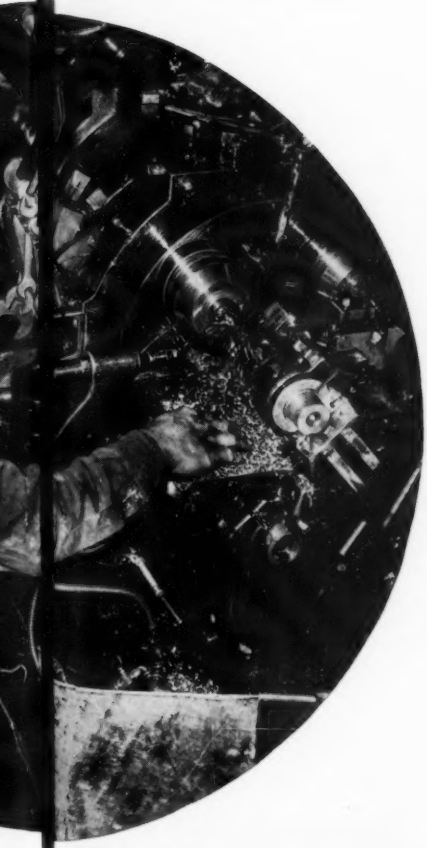
What is Occupational Dermatitis?

Occupational dermatitis is a sick skin caused by some irritating substance contacted by the worker in his employment. Dermatitis, as exemplified by sunburn, ivy poisoning, athlete's foot, pimples, is an ill that all flesh is heir to but in such forms is not industrial; in fact, most dermatitis has no casual relationship with

and Protective Measures
Industrial Dermatitis

THOMPSON
Mutual Liability Insurance Company

sive that an industrial concern having a dermatitis hazard can control it with a fair degree of assurance.



employment. Perhaps 15% of all cases are industrial, and their causes may be irritation from contact with chemicals, friction, bacteriological, or fungus infection, etc. The principal point to note here is that in the chemical group there are two principal classes: the primary irritants, such as acids, alkalis, commercial solvents, etc., which irritate any skin, except tough hides, and a large indefinite list which are not necessarily irritating by their nature, but to which certain individual people are susceptible, or hypersensitive, or allergic.

QUESTION 2

How can it be determined whether or not any Dermatitis Case is of Occupational Origin?

For a dermatitis case to be considered of occupational origin, it must fulfill the following criteria:

1. The time relation must be right: that is, if a man goes to work on a job today and two days later develops a skin difficulty, it is reasonable to suspect occupational relationship.

2. The exposure must be demonstrated; that is, it must be known, or shown by competent medical evidence, that the job on which the employee is working presents definite dermatitis possibilities.

3. If the dermatitis is thus demonstrated, the employee upon removal from that particular job should show amelioration of the condition.

4. There should be no medical treatment in process for this or other skin condition because frequently substances used for treatment may of themselves produce dermatitis.

5. The appearance of the dermatitis should generally be related to the part of the body exposed, usually the head, neck, hands and arms.

QUESTION 3

Does the hazard occur more frequently in some Industries than in others?

Yes, some of the principal dermatitis exposures from which very large numbers of true cases come are as follows:

beam house (tanneries, from chrome tanning solution)
dye house (textile operations, in the bleaches and dyes)
shoe factories, from cement solvents
rubber manufacturing, from solvents and rubber assistants
printers and publishers, from the inks
food manufacturing, especially confectionary, from sugar dust
chemical plants, from acids, caustics, and many organic chemicals
machine shops, from cutting oils
petroleum products, from gasoline and oils
metal trades, from chromic acid in plating
vegetable canning, from green vegetables by allergy

Some forms of industrial dermatitis are characteristic of certain occupations, as anthrax from handling hides and wool, erysipeloid in meat and fish handling, actinomycosis in cattle handling, X-ray dermatitis in X-ray operators.

QUESTION 4

Have all the specific causes of Dermatitis been ascertained?

No. Up until recently there were reported 980-odd substances which were known to have produced industrial dermatitis. Most of the substances which affect only susceptible individuals were in the list. This list cannot by any means include all the substances which are capable of causing dermatitis because new substances are discovered every year and reported. The introduction of new chemicals in industrial processes will frequently demonstrate themselves to be dermatitis hazards and with which no difficulty has ever before been experienced.

In addition to substances, many jobs also cause it; for example, pressure and friction produce blisters and callouses which are just as much dermatitis as a burn produced by exposure to ultraviolet light. Then, all

SORE HANDS MAKE SORE WORKERS !

Sore, chapped or irritated hands often disrupt an otherwise good employee relations program. Realizing this, 3462 leading manufacturers today furnish Formula SBS-11 to their employees for removing grease, grime and bacteria quickly, and keeping hands soft, smooth and protected. Formula SBS-11 costs less than 1c a week per employee. Write today for generous FREE TRIAL supply to Sugar Beet Products Co., 340 Waller Street, Saginaw, Michigan.

Formula SBS-11
THE WASHWORD OF INDUSTRY

• The bleaches and dyes used in textile operations rank high among the causes of occupational skin diseases. Men so engaged must wash up thoroughly at the end of each day.

these causes producing some degree of irritation may be complicated with infection, which may, or may not, be the result of the condition under which the employee works, but when a trifling but still definable dermatitis becomes infected from whatever source, the disability is considered industrial. A striking illustration of this is a series of bad boils in which the primary lesion was a minor irritation from contact with cutting oil, but the infection may, or may not, have been in the oil itself. Oftentimes, one employee inoculates cutting oil flowing in a common system and thereby infects the rest. Again, friction with the skin dry may be harmless but when the skin is wet produces the irritation. This is illustrated in the handling of skeins of yarn as in silk mills, where they are stretched over the hands of the operatives. Lesions frequently appear on the hands in the area which rubs the yarns.

(Continued next month)

Steam Hose Safety Idea

A worker picked up the steam hose and directed another member of the crew to turn on the steam. This party opened the valve more than a full turn. Not seeing the steam come from the hose, he opened it another turn. At that moment the hose appeared to explode, and the man holding the hose was deluged with hot water and steam before his helper could get the valve closed. On investigating this case, it was found that the hose was not plugged up as at first reported. Evidently the hose was filled with condensate, and this water formed a plug-up ahead on the steam. When more steam was turned on, it drove the water out with terrific force, with results described above. The man escaped with a minor burn on his forehead.

It was recommended that all machine crews, and others who handle steam hoses, should be instructed when opening steam valves to merely "crack" the valve until they see the steam issue from the end of the hose. Then open the valve as required. This method will eliminate the hazard of being burned by hot water and steam when using a hose which is not constantly in use. Also machine crews should report all leaky steam valves immediately.

Be Prepared . . .

With the hot summer months coming on it is important that you take inventory of your various heat control devices.

Check man-cooling fans, ventilating systems, salt dispensers, salt tablet supply and all employee comfort equipment.

℞ —225gr. SALT Per Day

By R. C. ENGEL, M.D.

IT MAY be well to consider briefly the normal physiological heat relations which exist between man and his environment. Body heat is derived from combustion in the tissues of various food stuffs. The muscular system having the largest mass is responsible for the greatest part of the total heat production. The body constantly produces heat. This heat must be thrown off as it is produced. If it could not escape, the heat output would be sufficient to raise the body temperature to the boiling point in about one and a half days. The average output of heat in the human body is estimated from 2400 to 3000 calories a day, and with hard manual labor may rise to 6000 or more a day. At rest, it may fall to 2000 or less per day.

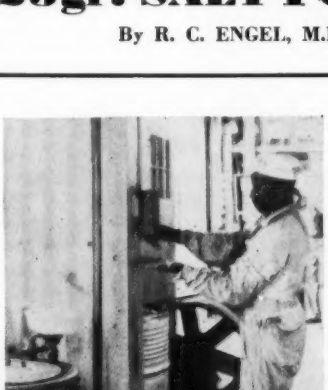


Photo courtesy Johns-Manville Corp.

Body heat is eliminated: First, through radiation, conduction, and convection from the skin—73%; second, evaporation—15%; third, vaporization of water from the lungs —7%; and the balance in urine and feces. It has been known for about two centuries that a high external temperature may exert a bad effect upon the human body. The failure of the human body to cope with a high environmental temperature is generally associated with the clinical conditions that are identified as sun stroke, heat exhaustion and heat cramps. The death rate of heat cramps is very low. Hospitalization is necessary for only a very small percentage of the total number afflicted.

Heat exhaustion and its milder form, heat cramps, is in reality a condition brought on by excessive perspiration which removes from the blood a large percentage of its sodium chloride content. The amount of water carried off by this excessive sweating is replaced by the drinking of equal or large amounts of water. *If at the same time sodium chloride (salt) is taken in a sufficient quantity to make up the loss sustained, heat cramps or heat exhaustion may be avoided. Intake of water alone will cause water poisoning or heat cramps.* It is estimated that as much as 15 pounds (2 gals.) of water and 25 grains (6 teaspoonfuls) of salt may be lost in the course of 24 hours by excessive sweating. The normal intake of salt is 7 to 15 grams (105 to 225 grains) per day, and under nor-

mal conditions all but 1 to 2 grams of the amount taken in is put out through the urine.

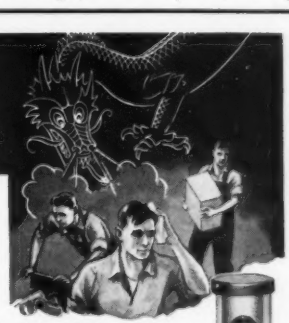
Sweat contains about .25% of chlorides usually as sodium chloride. If the loss of salt through sweat is allowed to continue for long periods, the body is unable to retain fluid, and this condition induces cramps and heat exhaustion.

Research men have proved that sodium chloride is required largely in all the tissues, particularly blood serum, and is also necessary, functionally, to maintain normal osmotic pressure and the retention of water in the tissue. The sodium chloride exists in the blood to the extent of .5% to .6%, and the normal osmotic pressure of the blood is mainly dependent on it.

Prevention of heat exhaustion and heat cramps is largely a matter of adult education. Each one of these is predisposing to any set of causes tending to lower bodily resistance and these may be mentioned as fatigue, poor food, improper hygienic surroundings, excessive use of alcoholics. Actual exposure to high temperatures with high humidity may be direct causes.

Employees should be urged to keep the skin clean by daily bathing. Clothing should be loose and light, moderately absorbent, and thin. (Exposure of bare skin prevents evaporation.) A balanced diet—less meat and more vegetables in the warm weather should be the rule. Warm lunches are preferable to cold lunches and cold drinks so as to prevent gastric upsets. Moderation in the use of fresh fruits. All alcoholic drinks should be forbidden. Citrus drinks can be used to advantage, as they encourage

HEAT-FAG visits every PLANT



HEAT FAG threatens *all* workers who sweat — because sweating robs them of vitally needed body salt. Morton's Salt Tablets are the simple, effective way to replace that loss and check Heat Fag's toll on production . . . *Write for folder: "Heat Fag Among Workers."*

Morton's Modern Sanitary Dispenser
Delivers tablets one at a time. Morton's Salt Tablets are made of the most highly refined salt, pressed into convenient tablet form. Easy to take with a drink of water — dissolves in less than 50 seconds after swallowing.

DISPENSER 500 Tablet Size... $3.25
1000 Tablet Size..... $4.00
Case of 9000 10-grain salt tablets $2.60
Shipped Prepaid

MORTON'S SALT TABLETS

MORTON SALT COMPANY CHICAGO, ILLINOIS

Fairway Junior Dispenser

Heat Sickness Cuts Profits—Fairway Tablets Save 'Em

When workers sweat sufficient salt out of their systems, physical endurance is decreased and production per man is below par. The normal intake of salt with meals doesn't compensate for this severe drain, and it naturally follows profits suffer.

The usefulness of FAIRWAY SALT TABLETS was discerned during ten years of close observation of the many ill-effects of hot work in all types of industry. Results where these pure salt tablets were made available to workmen were amazing. After each successive test FAIRWAY TABLETS won favor from the most careful industrial physicians. There are now installations in thousands of plants of all sizes throughout the United States and many foreign countries.

Today there are FAIRWAY TABLETS and DISPENSERS suited to every need. Write for the authoritative treatise, "Keep Your Workmen On Their Feet." Free for the asking.

FAIRWAY LABORATORIES, Inc.
1534 North Hadley St. St. Louis, Mo.

coolness through evaporation and elimination.

And last, but the most important preventive measure is the use of Sodium Chloride salt tablets in at least 15 grain dosage. Employees should be urged to use at least 15 tablets a day or a total of 225 grains. Proper ventilation, air conditioning, and rest periods are necessary requirements for a sound health program.

Interesting Device

An executive tells of an interesting "gadget" created in one of the plants of his company. A mirror 54 inches high by 25 inches wide has been mounted in a cabinet about 4 inches deep, fitted with double doors, and on the front are painted the words "Open These Doors and See the Best Safety Device Known." The words "I Am It" are stencilled at the top of the mirror. The cabinet is located just outside the entrance to the First-Aid room.

Paper Towels for World's Fair

The Scott Paper Company of Chester, Pennsylvania, announces that it has again received a contract from the World's Fair Corporation to supply its towels for use in all World's Fair operated washrooms during this coming season.

Last year over 3,000,000 towels packaged in red and blue glassine envelopes were used by World's Fair visitors. These envelopes each contained two towels and were sold for one cent in all World's Fair washrooms.

New Dust Control Device for Granite Industry

• *Note the dust created in this diamond pointing operation.*

A large portion of the dust generated in the Granite Industry is created by the use of hand pneumatic tools used to produce the lettering and intricate carving on memorials, together with plug drilling and rotary grinding. Recent developments in dust control in this industry have made use of the primary principle of dust control, the collection of dust at its source.

Tests have shown that it is now possible to keep the dust concentration within safe working limits by the use of especially designed rubber hoods, weighing from two to eleven ounces. The hood is attached directly to the body of the pneumatic tool or grinder and connected to a source of suction with a light hose. The air flow is so proportioned as to take only the smaller size particles, resulting in a requirement of a minimum amount of air to collect this dust. It is claimed that this new system uses only 1/20 of the air flow required by earlier suction devices, and that horse-power requirements and pipe sizes are also considerably reduced.

• *The use of the new dust control device makes diamond pointing virtually a dustless operation.*

Eye Injuries Reduced

The use of this device makes it possible to adjust tool lengths quickly and unimpaired steady tool operation. Flying dust particles are largely prevented, thus reducing eye injuries and dust is controlled within one-fourth to three-fourths of an inch of its source, with no additional attention on the part of the operator.

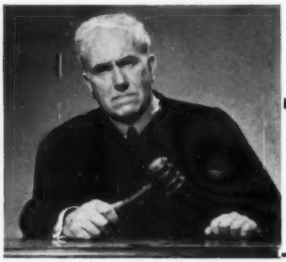
The control of harmful dusts created in the granite industry has always been a major problem and the introduction of this new device should help reduce this problem.

Procter and Gamble Says

"It has always been the policy of the company to hold supervision responsible for safe operation, and there is no intention of changing this position. However, too often in spite of close and consistent attention to safety by the foreman and supervisor and, with extensive safe-guarding of equipment and machinery, an employee will take his life in his hands and gamble with it.

"Such gamblers with disaster are a menace to themselves, to their fellow employees and to the company. *When they lose, nobody wins.* There is only one cure for them, and that is to remove them from the danger situation before an accident occurs."

Right off the Docket



The trend of litigation on workmen's health and accident compensation is reflected in these briefs of the latest and most representative cases coming to trial in the intervals between issues. Familiarity with this trend is important to every industrialist.

Hernia Developing Some Weeks After Accident Compensated As Occupational Disease

While lifting a channel iron weighing approximately 200 pounds, the iron got out of control, and the plaintiff felt a pain in his back. He reported the accident, and was assigned to lighter work. This happened in February 1938. The following August, after experiencing continuous pain, the employee went to a doctor and it was discovered that he was suffering from a double hernia.

The defendants argued that the strain sustained in February was not the proximate cause of the hernia which developed at a later date. The court rejected this defense. It held that under the occupational disease statute in Michigan, hernia was listed among the thirty-one separate afflictions or diseases that were compensable. The statute said hernia was compensable, if clearly recent in origin and resulting from a strain arising out of and in the course of employment, and promptly reported to the employer. Under this rule, it is not necessary to show a single fortuitous event which is the proximate cause of the injury. An award to the employee was confirmed.
Lohrman vs Haven Busch Co., et al. (Mich.) 291 N.W. 253 (April 1940)

* * *

Finger Amputation Leads to Pneumonia

On April 27, the employee sustained an injury to his right middle finger while working for the defendant concrete construction company. He was taken to a hospital where the finger was amputated down to the first joint, the operation requiring the administering of ether as well as gas. On May 9, the employee developed a sore throat, and there was still a small amount of pus in the finger. On May 13 he died of bronchial pneumonia.

The Court in making an award for the death pointed out that after the operation, the employee was in continuous pain, was unable to sleep nights, and ate only a quarter as much as he was accustomed to eat. These factors, which were attributable to the accidental injury, resulted in a lowered resistance, and led to the pneumonia.
Brief vs General Concrete Const. Co. (Mich.) 290 N.W. 895 (March 1940)

* * *

South Carolina Supreme Court States Purpose of Workmen's Compensation Act

The South Carolina Supreme Court in a recent case said the following concerning the purpose and interpretation of the Workmen's Compensation Act:

"The Workmen's Compensation Act is intended to be for the benefit of employees and must be construed liberally in their favor."

"The basic purpose of the Workmen's Compensation Act is inclusion of employers and employees and not their exclusion, and its presumptions and its penalties are di-

LEHIGH HEAVY-DUTY SAFETY BOOT

1107—Super-quality, heavy duty black rubber knee boot with 14-iron, black carbon rubber sole moulded in anti-skid cleated pattern. See list of features below. In stock in whole sizes 5 to 12.

1109—Same in 3/4 hip boot, reinforced at knee. Whole sizes 6 to 12.

1112—Same in full hip boat, reinforced at knee. Whole sizes 6 to 12.

NOTE THESE QUALITY CONSTRUCTION FEATURES:

1—Binding prevents tearing at top

2—"Layered" construction for extra wear

3—Reinforced counter shaped to FIT at heel

4—Wide, moulded rubber heel wears longer

5—Sole vulcanized to upper; can't tear loose

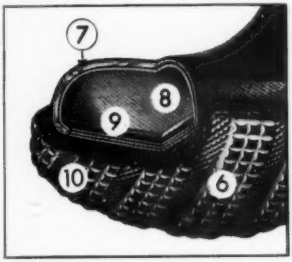
6—Extra heavy, long-wearing anti-skid sole

7—Heavy rubber reinforcing over steel toe box

8—Heavy, moisture-proof, boot-duck lining

9—GENUINE LEATHER INSOLE eliminates "burn"

10—Wide flange roots steel toe box in place.



This boot is a husky . . . *made especially for miners, workers in mud, water and sludge, and for wear on broken-stone surfaces that quickly would rip any ordinary boot to shreds. In addition to its exceptional wearing qualities, it provides maximum protection against crushed toes caused by rock or coal slides, or falling tools and equipment. It comes, also, in standard weight for use on any ordinary job . . . and it's only ONE of Lehigh's FIFTY specialized safety shoe styles.*

WRITE TODAY FOR COMPLETE CATALOG

LEHIGH SAFETY SHOE CO. ALLENTOWN, PA.

rected toward the end of effecting coverage rather than noncoverage."

"If possible, the provisions of Workmen's Compensation Act must be reconciled, the act sustained, and its purposes effectuated, and any reasonable doubt as to construction must be resolved in favor of claimants."

Ham vs Mullins Lumber Co. (S.C.) 7 S.E. 2nd 712 (March 1940)

* * *

Silico Tuberculosis Compensated As Occupational Disease

The claimant, after working for the defendant, an automobile body manufacturer, for ten years, was forced to quit work because of the development of a silico-tuberculosis condition. This is a condition combining the two pathological conditions known as silicosis and tuberculosis. The claimant was a metal finisher, and his job was to smooth the automobile bodies in preparing them for the paint job. The evidence disclosed that in finishing off the bodies various tools were used, including buff wheels, disc wheels, sandpaper, files, hammers, etc. It was shown that the room in which the work was done was at all times permeated with dust—so dense that it could be seen by eye. Analysis of the dust disclosed that a high percentage of silica was present in it. The men working with the disc and buff wheels were furnished respirators, but the claimant and other workers who worked in close proximity to the men with the respirators did not have them.

The company contended that the claimant had contracted silicosis years before he entered their employ when he worked as a miner in Colorado. The Court refused to recognize this contention and made an award. It said that even though the claimant may have had silicosis before, his work with the automobile factory aggravated such condition, and regardless of whether the disease was wholly contracted in his present employment, or a prior diseased condition was made worse by the employment, he still was entitled to compensation for the occupational disease.

Leonard vs Fisher Body (Mo.) 137 S.W. 2nd 604 (March 1940)

* * *

Compensation Granted for Death Caused by Heat Prostration

The employee, who was a man 63 years old, and in good health, worked for the defendant, a sugar refining company. His work required him to sweep up spilled sugar from the unloading dock of the company. On the day of the employee's death he started work at 8 A.M., and continued working with the exception of an hour for lunch until 4 P.M., at which time he was taken sick. He was brought to a hospital, and at 6:30 P.M., he died. The cause of his death was heat prostration. The day had been unusually warm, the mean temperature being 88 degrees F.—which was 15 degrees above normal.

The contention was made that no compensation should be awarded because there was no evidence that it was any hotter on the dock than it was elsewhere in the locality; also, that there was no evidence of any extraordinary strain, effort or exertion.

The Court made an award. It held that there can be a compensable "accident" without proof of extraordinary strain or exertion, or without proof that the employee was subjected to a greater exposure than to which other persons generally in the locality were exposed. It said, that the employment was a contributing cause without which the accident would not have happened, and the accident was a contributing cause without which the death would not have resulted.

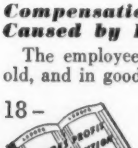
Ciocca vs National Sugar Refining Co. New Jersey (N.J.) 12 Atl. 2nd 130 (Jan. 1940)

Reversal

In the June, 1939 issue of OCCUPATIONAL HAZARDS a case was reported in which the Superior Court of Pennsylvania had granted an award for death resulting from pneumonia. The pneumonia had been contracted when it became necessary for the employee to work a number of days in mud and damp to clean out a plant which had been inundated during the Pittsburgh flood of March, 1936.

The company took an appeal from this decision, and recently the highest court in Pennsylvania reversed the Superior Court and entered a decision for the company. The finding of the Court was to the effect that the contraction of the pneumonia in this case could not be considered an "accident" within the meaning of the Pennsylvania Workmen's Compensation Act.

Parks vs Miller Printing Machine Co. (Pa.) 9 Atl. 2nd 742 (Dec. 1939) reversing 4 Atl. 2nd 831



Drastic Measures REDUCE Accident Frequency and Severity RATE

By HENRI F. HORN, SUPT.

Berkshire Fine Spinning Associates, Fall River, Mass.

HERE is good practical advice from an operating executive describing the methods his firm employed in developing a prize-winning safety program.

Four years ago we realized that, if we were to lower our accident frequency and severity rate, drastic methods would have to be adopted. We decided to undertake a complete and definite study to find ways and means of establishing a record of safety.

With that in mind we tackled our problem in a systematic manner and, by constructive thinking, hard work and cooperation, we now believe we have reached the main objective that we set out to do four years ago.

Below is our safety record for the last four years:

1936—44 lost time with 1278 lost time days
1937—16 lost time with 902 lost time days
1938—Not 1 lost time accident in a full 52 weeks run
1939—1 lost time with 46 lost time days
1940—3 months to date—No lost time

We employ a working force of 1,000 to 1,350 employees, running 2 and 3 shifts in various departments of the plant. Many nationalities make up our employee personnel; among them Portuguese, Italians, Polish, French Canadians and Irish. These people are mostly all naturalized American citizens. A great part of them are also native born Americans.

Awards made to us by a major insurance company since 1938 are as follows:

1. **"Certificate of Merit" for running 251,582 man hours without a lost time accident, from June 1937 to August 1937.**
2. **A second certificate of merit for running 500,352 man hours without a lost time accident from June 1939 to October 1939.**
3. **A bronze plaque for running 3,012,328 man hours from October 1937 to June 1939 without a lost time accident.**
4. **Both in 1938 and 1939 we were awarded the Massachusetts Safety Council gold trophy for being the leader in New England's textile industry.**

We have run so far, the first three months, without a lost time accident in 1940 and have accumulated since June 1939 the total of 1,761,432 man hrs. without any disabling or lost-time accident.

These splendid results have been attained because of the groundwork we laid four years ago. Following is a review of the procedures and systems we put into effect:

1. Although our first-aid department, in charge of a competent nurse, was being handled very efficiently and records list-

ing causes of accidents, etc. were being kept in a methodical manner, we found that the co-operation between the first-aid department and the "key men" in the plant left much to be desired. Based upon this finding we called a safety meeting to discuss the very important subject of relationship between first-aid and over-seers. It was shown that, in order to get to the bottom of our accidents, overseers must be fully informed of the nature of the accident and then in turn study the causes that lead to each accident so that they might suggest a remedy to prevent recurrence.

2. Our second plan was to organize an educational program among our employees in the prevention of accidents. This has been accomplished by safety posters, safety films furnished by our insurance company, and individual pamphlets for each department of the plant describing the "Safe Practice Rules."

   Another device is for the Superintendent's office to send out periodic letters of encouragement or constructive criticism to employees from time to time. It is our opinion that the best possible safety tool is a careful and safety-conscious employee.

   We have kept this very important fact before our employees—that no amount of compensation will alleviate the suffering and misery caused by a careless accident, and that the employee as well as the employer is the loser in the long run.

3. Thought number three was the organization of a safety committee. We believe that our safety committee is unique in its formation and the manner in which it functions. It is composed of only one person per week, and is in operation 52 weeks in the year. Here is how it works:

   The first person appointed to assume the responsibilities of the safety committee is the plant superintendent, followed by the assistants, overseers, foremen, second hands, third hands, and thus right down the line. Every one gets a chance to give his suggestions and new ideas are offered every week. I am attaching the form that we now use and have found very helpful.

4. An efficient system of "good housekeeping" has also been put into effect, and this is checked every week-end. When some departments have accident hazards, they are notified to remedy that particular situation and to report the progress made at the weekly overseer's meeting.

5. Finally, suggestions are asked at all times from all employees in the plant with regard to better guards, machines, right ways of handling and piling, etc., and the application of the suggestions have oftentimes prevented an accident. The success of this program has required a tremendous amount of work on the part of all of us in educating our employees to become "Safety Conscious."

These safety records were accomplished by the rank and file of our employees in their earnest cooperation to make theirs a safe and efficient plant. It is common knowledge that if you have a safe plant you also have an efficient plant, a full pay envelope, which in turn enables us all to enjoy the fruit of our labors.

The employees in turn have appreciated the efforts of the management. Their rigid application to safety principles and continued high degree of cooperation have made our safety records possible.

Report Injuries Promptly

A worker suffered an eye injury while drilling a hole in a crane brake shoe with an electric drill. The accident was not reported until two days after its occurrence

It was revealed that, when the injured complained of his eyes smarting, his fellow workers laughed at him and as a result, he did not report the accident to his foreman or go to the Medical Department until several days later.

Protect the eyes of your workers by insisting they use the right goggles, against flying particles, dust, dirt, excessive heat and light.

Every eye injury should be reported promptly!

3 Major Classifications

Three major classifications—Ply No. 1 and 2, which are applied like a vanishing cream and Ply No. 6 of the ointment variety have been developed scientifically with a background of medical research upon the principle of applying an extra layer or coating of skin consisting of ingredients that are insoluble in the specific chemical or chemicals to be combatted. There are more than 1600 chemicals that have known toxic and irritating qualities, which are used in various industrial processes. This list grows greater every year because of the rapid strides and progress that are being made in the field of chemistry. *Send for 40-page book without obligation.*

MILBURN COMPANY **905 Henry Street, DETROIT, MICH.**

An Idea for Safety

Pay check inserts occupy a prominent spot in safety promotional work. Various inspirational messages, facts and figures can be readily distributed by this method.

One particular company uses pay check inserts to review their lost-time accident experience a dozen years ago as contrasted with last year's experience and say:

"Approximately 4,200 more of our employees would have been injured from 1928 to 1939, inclusive, had we continued at the 1927 rate.

"No wonder that we campaign for safety with confidence!"

Here is an idea that might be utilized by other organizations. It wins support for the safety program by pointing out the actual results achieved—at a time when employees are receptive to suggestions.

Good Housekeeping Tip

The manager of one plant has organized a committee of three men for monthly inspection work. The personnel is changed each month and is made up of employees in all departments. The committee is supplied with signs seven inches by twenty-two inches on which is painted in large red letters "Cleaning Up Needed Here—Inspection Committee." When the committee comes upon a condition requiring attention, it leaves a sign. The sign stands out so prominently that everyone in the department and other departments can see it.

Foremen are told they have twenty-four hours in which to have the sign removed by cleaning up. The committee keeps a record of location where signs are left and checks them off, as foremen turn in the signs after clean-up jobs are completed. The departments that need it are cleaned up rapidly, and the employees are much more interested than ever before in good plant house-keeping.

New Address

The Morton Salt Company announces the removal of its offices to 310 South Michigan Avenue, Chicago, Illinois.

700,000 Pairs of Goggles Used in Five Years

By V. A. ZIMMER, U. S. Dept. of Labor
Washington, D.C.

IN NO other class or type of accident has there been such marked results from safety programs as those involving eye disabilities. There is no need to labor the point with extended illustrations. Safety experts, engineers, ophthalmologists, physicists, and others have analyzed, diagnosed, prescribed for many years. They have pointed out the great monetary loss annually assessed upon industry and the public due to eye injuries and the terrible plight of the human beings who sustain them. What is needed, of course, is more and more action in doing the things that we have been told to do.

The Federal Government is vitally interested in this subject. The division of Labor Standards was set up only five years ago in a Department that 20 years before was created essentially to promote the welfare of the wage earners of this country. One of the primary objects of our Division was and is the promotion of health and safety in industry. The range of subjects under this broad head is extremely wide and of necessity we have been able to concentrate only upon relatively few of the major health and safety hazards.

The interest of the Government, of course, as manifested in the interdepartmental Committee on Adequate Lighting is that of an employer. It might be interesting to recall that the United States Government can be definitely termed as a large employer. Very close to 900,000 workers are included under workmen's compensation protection by the Federal Government, and contrary to the usual thought all Government employees are not white-collar workers employed in well-lighted offices. As

The U. S. Government has purchased approximately 700,000 pairs of goggles over a five year period. This article emphasizes the importance the government places on proper eye protection.

a matter of fact there is no hazard encountered in private industry that does not have its counterpart in Government activities somewhere in the service, whether in the great shore establishments of the Army and Navy, the Forestry Service, in mining, marine, aircraft, and scores of other definitely hazardous undertakings.

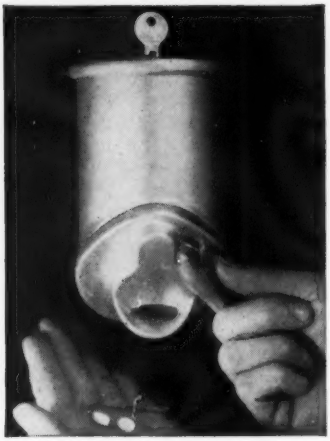
I am glad to report, therefore, that this largest of our employers has in a number of directions taken active steps to protect workers exposed to eye injuries. For instance, the United States Navy has prepared a code for various types of eye protectors that has been adopted almost in toto by the American Standards Association. The specifications describe the type of lenses, such as resistance to breaking and color filtering effect—the latter where eyes are exposed to bright flames. In preparing these specifications the National Bureau of Standards, the great technical agency of the Government, made the essential physical measurements in order that the data presented in the code be based on physical facts and laws. Standards of color tinted lenses or light filters are retained by the National Bureau of Standards for purposes of comparison.

At this time all of the Works Progress Administration workers exposed to eye hazards are required to wear goggles, and this rule is enforced to the extent that while the wearer is warned on the occasion of his first omission to wear them, he is discharged the second time that he is observed without them. As a result of this protection the Federal record shows that the percentage of eye injuries to total number of injuries is much lower than in private enterprises engaged in the same type of

(Please turn to page 32)

• The wearing of goggles should be made compulsory on all grinding operations. Men can be taught to save their eyes.

SALT TABLET DISPENSERS. A new line of sale tablet dispensers is announced by the Milburn Company.



The use of 100% extra heavy aluminum construction throughout make these units particularly desirable. The Dispens-Eze is guaranteed against breakage, corrosion, moisture and tampering. Yale locks are used as well as a specially treated aluminum that prevents corrosive elements from contaminating the salt tablets. No springs or other complicated mechanisms are introduced that might affect the simple operation of the Dispens-Eze.

NEW WIRE ROPE CLIP. A new wire rope clip has recently been put through competitive laboratory tests. According to the manufacturers—the Thomas Laughlin Company, the tests indicate a 20%-30% increase in holding power and a marked lessening of rope distortion.

This new product does not materially modify the fundamentals of clip design which have long prevailed in the industry. Results are attributed to a few simple features: bolts and identical bearing surfaces on opposite sides equalize the pressure on the rope.

Ease of application, fewer accidents and savings in rope are among the advantages claimed by the manufacturers of the new "Safety" clip.

New Produ

EMERGENCY FIRE SUIT. This suit is designed to be put on fast—providing complete body protection for combating emergency fires.

Free swing raglan shoulder jumper suit

with overshoes attached is made from Underwriters' grade asbestos cloth. Overshoes are lined and have steel studded chrome leather soles with asbestos inner-

Additional information and descriptive literature on any of the products mentioned in this service department may be obtained by writing* Dept. N, OCCUPATIONAL HAZARDS, *812 Huron Road, Cleveland, Ohio.

THE FIELD

soles. The outfit allows full and comfortable fire fighting freedom.

The helmet is made from the same grade asbestos cloth and fully lined. Glare-proof brass screen covering a mica lens affords safe and full vision.

FLUORESCENT LAMP. A new 85-watt 59-inch type RF fluorescent lamp producing white light and designed especially for industrial service has just been announced by the Westinghouse Lamp Division The new lamps may be operated on either 105-125-volt or 210-225-volt 60-cycle a-c circuits in special equipment which provides direct current through the use of a rectifying device. The new white and the blue-white lamps are interchangeable in single and twin fixture units available for their use.

Color of the light produced by the white lamp is somewhat like that of the daylight Mazda F (flourescent) lamp. It is suitable for a wide variety of industrial uses, including those where color discrimination is important.

M.S.A. TELEPHONE MASK. Announcement is made of the new M.S.A. Telephone Mask by Mine Safety Appliances Company. The device permits clear, dependable two-way conversation between a mask wearer and the fresh-air base located at some distance, or between two widely separated mask wearers. No batteries or other external power source is required, as all power used is derived from the voice itself.

When used in industrial service, a workman wearing the M.S.A. Telephone Mask is protected against gases and fumes, is free to move about and has both hands free, and can carry on a continuous two-way conversation with another mask wearer or with an outside base. In fire fighting service, the M.S.A. Telephone Mask wearer can penetrate remote, smoke-filled places and give immediate on-the-spot reports to the chief or crew member at the fresh air base.

UNBREAKABLE WICK FEED OILERS. A new, visible, unbreakable wick feed oiler has just been announced by the Trico Fuse Mfg. Co.

The oiler illustrated is intended for economical use on machinery which operates intermittently.

Statements made in connection with any product mentioned in this service department are based on manufacturers claims. Although these claims are believed to be true, this magazine does not guarantee that to be the case.

This month in *Washington*

By W. T. CAMERON, Chief Safety Adviser, U. S. Department of Labor

How Would You Do It?

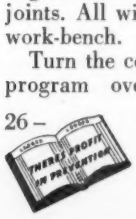
GIVE three or four artisans, each proficient in a particular craft, a project to perform and you will achieve about the same results—but in as many different ways as you have craftsmen.

Tell a plumber to construct a workbench and he'll make it out of pipe. It will be strong and substantial with threaded joints, couplings, tees, unions and flanges. Ask the carpenter, and he'll make you a workbench just as substantial, but he'll make it out of wood. Ask the foundryman, and you'll get cast iron legs and framework. The cabinet maker will mortise and tenon the joints and use dowell pins. The metal worker will bolt it together and give you a sheet metal top; the welder will make it out of angles and strap iron with welded joints. All will deliver a satisfactory work-bench.

Turn the conduct of a plant safety program over to the purchasing agent, the sales manager, the head bookkeeper, the chief engineer, the plant doctor, the personnel director, or the lawyer, and what do you get?

First, let's turn the program over to the purchasing agent. If safety is only a part-time job, he immediately looks around for materials and methods with which he is familiar, those with which he works every day. This suggests a catalog, card file, ads in the trade journals, salesmen, performance record. He thinks of safety in terms of *things* he can buy. He checks into the machines and substances he purchases—are they guarded? Is the material toxic? *Where can I get blowers, goggles, exhaust systems, saw guards, respirators, ladder feet, leggings, gloves?*

Turn it over to the sales manager, and his first thought is "If the law of self preservation isn't bringing about safety, why don't we *sell* it?" So he goes to work with *his* tools, *his*



materials. First, "How can we advertise our product?"—Bulletins, posters, banners, flags, safety slogans. Next, "How can we get our message across to the prospect?"—Mass meetings, speeches, inspiration, contests, stunts, playlets and appeals to basic human emotions.

Hand it to the bookkeeper. He says, "How much do accidents cost? How can we cut our insurance rates? Accidents add to plant overhead and increase the cost of our product. We've got to cut out these unnecessary items of expense." Some bookkeepers would say, "Where can I get safety services for nothing? What free services can I get from the State labor department, the insurance carrier, the Federal Government?"

Toss the problem in the lap of the chief engineer. Out comes his bag of tools, labeled "Equipment Layout," "Flow Sheets," "Job Specifications," "Materials Handling," "Maintenance Schedules," "Machine Design," "Space Control." He says, "To bring about safety, all I need to do is to see that the plant and the job and the process are properly laid out and insist that control measures are faithfully lived up to by the supervision and the men in the performance of their regular duties."

Hire a doctor. Your product here will depend on what the M.D. likes to do best—fancy hemstitching, plaster casting, iodine dabbling, on one hand; or, preventive medicine, on the other. Too many times his idea of success is, first, to hire workers who are physically able to "take it" and young and healthy enough to stage a quick come-back if they do get hurt; taking no chances on long, lingering disabilities complicated by syphilis or heart disease.

When the Call Is For "A Bandage -Quick!"

Use **Band-me-Quick** new Individual Bandage. Made of Gauztex. Self-adhering gauze sticks only to itself—not to flesh. Medicated pad. 9-inch length. Keeps out dirt yet air circulates freely. **No Throw-Aways.** Each Band-me-Quick cellophane wrapped. **Stays fresh.** 100 to a box. Order from supply house or GENERAL BANDAGES, INC., 508 S. Dearborn St., Chicago.

GAUZTEX
Band-me-Quick

Ask the personnel director to take over the job. Out come his forms, his application blanks, his aptitude tests, his intelligence tests and time and motion studies. He starts an in-service job training program and brings out his whole bag of tricks for "influencing attitudes."

The Lawyer

Give the lawyer a crack at it and he will review the State and Federal legal requirements in regard to safety and health, will issue orders that compliance be brought about to the letter (not always the spirit) of the law; he will check carefully on the legal requirements of the compensation act and spend time on the administration of the act. If there are any loopholes, he's pretty sure to find them.

(I had better say right here that I have seen some real safety records turned out by doctors, lawyers, purchasing agents and other specialists who have been given the responsibility for safety. They are, however, rare exceptions to the rule and have only been successful by making a thorough study of safety engineering and promotion.)

HOT WEATHER SAFETY NEEDS!

• SWEAT PADS

Worn across forehead to absorb perspiration. Prevents its running onto work, into eyes or "fogging" goggles. Two types: Cellulose Sponge, with special reinforcement and elastic straps. Also replaceable Cotton Pads, held with spring clips. Inexpensive time savers. Get prices.

• SALT TABLETS and DISPENSERS

Full line of leading brands. All types of dispensers —metal, glass, plastic or paper. Let us quote on your needs.

• ANTI-MIST FOR GOGGLES

Rub on lenses, wipe clean, and glasses will not fog or sweat for hours. Get prices.

PULMOSAN
SAFETY EQUIPMENT CORP.
Dept. OH, 176 Johnson St., Brooklyn, N.Y.

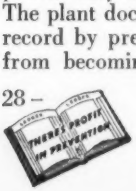
• **WRITE** for new leaflet on Hot Weather Safety Aids and Hygiene.

The plant engineer who makes the workplace safe and maintains a smooth and continuous flow of production without mishaps, mistakes or interruptions, achieves a good safety record. The personnel director who hires skilled men of high intelligence, who trains these men to be proficient in their job assignments, who fosters and promotes pride in craftsmanship, loyalty to the company, can bring about a good safety record even in a plant which may not be mechanically and physically all that it should be.

The lawyer builds up a pretty good safety record simply through compliance with the State codes, rules and regulations, even though this approach may leave much to be desired. The plant doctor can produce a good record by preventing minor mishaps from becoming serious injuries, by cutting down the time lost through quick rehabilitation of injured workers and their prompt return to the job.

Each of these specialists can bring about some measure of safety success, but the fact remains that each is working on a different one of the causative factors that go to make up the accident sequence.

Of course, the aim of every plant manager and every safety director is to remove as many of the factors in the sequence as is possible. No all-time, long-haul accident prevention and health preservation program was ever built up as a "one-man show." The really successful business executive combines the talents of the carpenter, the welder, the tinsmith and the foundryman, and turns out a better workbench than anyone indi-



vidually could do. And by the same token the safety director (or the plant manager) starts in motion a safety program combining, correlating, integrating all of the talents at his command. Everyone from the administrative staff down through the line supervisors to the lowest employee in the plant has something to contribute because of his ability and knowledge and equipment. Why not put them all to work?

Proper Safety Footwear

Considering occupational accidents available statistics show that falls are the second most important cause of fatalities—handling objects and materials takes first place.

Falls from one level to another doubtless cause the most *fatalities*, but falls on the same level, resulting largely from slipping and tripping, also are numerous, and they produce many serious injuries—broken bones, sprains and strains, and cuts and lacerations.

The condition of floors and walkways in general often is an important factor in falling accidents, and it is essential, as far as possible, to keep all walkway surfaces free from slippery substances, and from objects that may slide or roll when stepped on or that may create tripping hazards.

Improper footwear is another cause of falls on the same level. Personal appearance is not of primary concern in industrial operations and, consequently, many men, from motives of economy, remove their street shoes when they arrive at the plant and put on some old ones that are "good enough to work in." As a matter of fact, many of them are *not* good enough—there are holes in the outer layers of the soles, in which splinters in a wooden floor might catch and cause the wearer to trip; or the soles are so thin that nails and other objects would pierce them easily; or the heels are "run over" so that a sudden movement of the wearer might result in a twisted and sprained ankle.

All work shoes should be strong and well made and should be kept in safe condition—*appearance* is a minor consideration. Moreover, they should be of suitable material, according to the hazards that may exist. Good, general-purpose shoes may well have soles and heels of special-composition material that will reduce the slipping hazard where oil, grease, or any other slippery substance is likely to be present on floors and walkways, and that is acid-resistant and long wearing.

It would seem that safety shoes with soles and heels of such material, to reduce the slipping hazard, and with invisible metal toe-caps to protect the feet against the impact of falling objects, would be the choice of industrial workers who wish to avoid painful injuries that would be likely to result from the use of improper shoes. The cost of a pair of well-made shoes of this kind, probably would be far less than the expense resulting from a single lost-time accident.

No Goggles

A packer was driving nails in a packing case when a nail flew up and struck him in the right eye. He sustained laceration of the eyeball. Injured was not wearing his goggles which was contrary to safety instructions previously given.

The Hidden Hazards . . .

By HORATIO McKENNA, Chief Engineer,
Union Oil Company, Seattle, Washington

GAZING up at a hospital ceiling, it is usually easy enough for a man to check back over the chain of events that brought him there. It's easy, that is, until he comes to the "If-only-I-hadn't-done-that" stage of his accident. That particular phase is always pitifully obvious when viewed through hindsight. To spot it through foresight is something else again. And yet it is in direct proportion to our ability to spot these hidden hazards that we may expect to preserve life and limb.

After all, most of the hazards that some day may get you if you don't watch out exist in the ordinary actions of everyday living. So why not stage your own "Professor Quiz" program once in a while and hunt for these hidden hazards? Once detected, they have no more chance of existence than a gold fish in college.

One or two examples from the writer's own experience will serve to illustrate this.

Have you ever seen a man voluntarily wear goggles when entering the firebox of an oil-fired boiler? Your probable answer is no. For, after all, these is nothing in there but a little dust to worry about.

Suppose, however, we take a look at that dust—particularly the dust with the nice golden hue. This dust likes to cling to the tubes in just the right position to fall across your face if it is disturbed. Let's collect some in a pail and stand a thermometer in it. The temperature reading is 60° Fahrenheit. Now let's pour in enough cold water to moisten the dust. The mercury snaps into action. Eighty degrees! One hundred degrees! One hundred and twenty! And in about three minutes it has reached 180° Fahrenheit! In the same three minutes the metal on your thermometer has turned several shades lighter, because of the corrosive action of the mess.

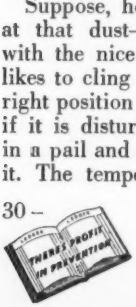
Ask yourself this question:

With your own private tear ducts waiting and willing to supply the necessary moisture, what would be the effect of an eyeful of this innocent looking but nevertheless potent dust? Well, your guess is as good as mine. But we both know this—we can eliminate both the guess and the hazard by wearing goggles!

And this puts us on the trail of another hidden hazard—although this one is hidden only by thoughtlessness, since it is out in the open and plain to see.

Have you ever noticed what a large percentage of goggles (especially those hung behind the old emergy wheel in the corner) can scarcely be seen through? The very same man who so carefully removes his reading glasses to wipe away a speck of dust will put on a pair of goggles so dirty that he cuts his vision 25 per cent. And he then proceeds to use his precious hands within a fraction of an inch of a whirling emergy wheel!

The reason, of course, is that everybody uses these goggles and that, as always, what is everybody's business



is nobody's business. The cure? Make every man responsible for his own goggles, or make one man responsible for all goggles.

How about the hidden hazard in your own job? Why not sit down right now and for the next ten minutes try to imagine just how the old familiar task could end tragically some day. You say that such a thing couldn't happen to you.

Just remember that it's because things that can't happen do happen that Ripley sits on top of the world!—

Foot Injuries Can Be Avoided

After observing the condition of the average factory worker's footwear, one must admit that most workmen are not conscious of foot dangers and invite foot injuries by their failure to protect their feet.

Worn and run down shoes cannot be comfortable, notwithstanding the fact that such an excuse is usually given by workmen who persist in wearing shoes that barely hold together. Good footwear is a safeguard equally as important as goggles, gloves, or guards placed on machinery to prevent accidents.

One of the most important items of a workman's apparel is his shoes. Run down heels, thin soles, broken counters, and split uppers are very prevalent and invite injury from nails, tacks, and bolts that stick up from floors. Sprained ankles and crushed toes can, in many cases, be prevented by the wearing of proper shoes. Common ailments of the feet such as corns, bunions, and callouses are often traced to shoes that do not fit.

Employees Study First Aid

• Representing fifty-four separate industries, 270 men were awarded certificates of completion at the 8th Annual First Aid Training and Accident Prevention course held by E. D. Bullard Company and sponsored by the A.S.S.E. San Francisco Chapter and the State of California Industrial Accident Commission. Instructor was R. McCaughan of E. D. Bullard Company.

Eye Protection . . .

(Continued from page 23)

activities. The Works Progress Administration attributes this enviable record to the provision for and the insistence upon the wearing of safety goggles.

More than a half-million pairs of protective goggles have been purchased by the Federal Government for the Works Progress Administration employees over a 4-year period, July 1935 to June 1939.

Again, we have another example in the Civilian Conservation Corps wherein, as in the case of the WPA, workers who are exposed to eye hazards are required to wear goggles as protection against sun glare, dust and flying particles. In the Civilian Conservation Corps this regulation likewise is enforced to the extent that an employee may be discharged if he neglects to wear the protective goggles. In this organization approximately 200,000 pairs of goggles have been purchased in the last five years. What this has done for safety is illustrated by the fact that in 1937 a total of 816 eye injuries occurred among 297,000 workers, while in 1938 this was reduced to 659 injuries among 298,000 workers employed. Incidentally, 1938 eye injuries constituted 2.3 per cent of all lost-time accidents.

Compensation Costs

In addition to the major humanitarian consideration involved in the Government's program for the reduction of eye injuries, it may be well to contemplate the terrific cost to the Government in terms of dollars occasioned by eye injuries. At the end of 1938 there were 26 persons who became totally blind through accidents who are to receive from the Federal Government nearly $750,000 in compensation, exclusive of medical expenses.

Another unit in the Federal Government immediately concerned with the problem of safety is that of the Bureau of Mines. The long experience of this Bureau in connection with underground hazards has made it keenly aware that accidents increase with reduced illumination. This is, of course, a particular and peculiar problem in the mines because of the dusty conditions following the blasting and other dust-creating operations. That Bureau is carrying on constant experiments and transmitting its results to all operators.

Necessary Co-operation

Coming back to the particular activities of the Division of Labor Standards, we recognize clearly the great service that has been and is being rendered in the field of safety by voluntary organizations. We recognize, too, that large industry in this country has made tremendous advances in accident reduction through purely voluntary action. Whether or not this voluntary action is prompted by motives of self-interest is of no consequence in appraising, as well as praising, the accomplishment. The fact remains that great good has been wrought by this and other organizations in stimulating thought and action upon this problem, but there is, nevertheless, a vast field of industrial operations almost wholly untouched by voluntary programs. These must be reached mainly by the State action. In other words, through safety regulations, rules, or codes enforced by factory inspectors.

JACKSON Eyeshields

Our Eyeshield Folder describes this and fourteen other types. Send for it today.

Type CH-3 protecting the eyes and face in a grinding operation. *Price $1.35, F.O.B. Detroit.*

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